BUREAU OF AUTOMOTIVE REPAIR

INITIAL STATEMENT OF REASONS

Hearing Dates: March 6 and 8, 2002

Subject Matter: Mandatory Emissions Inspection Standards and Test Procedures; Acceleration Simulation Mode Testing for Heavy Duty Vehicles

Sections Affected: §§ 3340.42 and 3340.42.1, Title 16, Division 33, Chapter 1, Article 5.5, California Code of Regulations

Problem Addressed:

In late 2000, the California Air Resources Board (ARB) released a report on the effectiveness of the Smog Check Program (Program). ARB's report indicates that while the current Program is reducing a significant amount of motor vehicle emissions, improvements to the Program must be made if California is to meet federal air quality standards. For example, California's 1995 State Implementation Plan - the blueprint submitted to the United States Environmental Protection Agency (USEPA) that explains how the state will achieve compliance – claimed an emissions reduction of 112 tons per day (tpd) for the Program. After careful analysis, the emissions reductions associated with the Program are closer to 65 tpd.

From many perspectives, achieving compliance with the federal air quality standards is vitally important to California. The federal government may withhold highway trust funds or impose other sanctions on the state, including the implementation of a federally designed Smog Check Program. Noncompliance has already triggered a third-party lawsuit against local metropolitan planning agencies, which rely on the emission reductions of the Program to acquire approval and federal funding for transportation improvement projects.

While these economic concerns are important, improving the air quality is essential to the health of all Californians. Senior citizens, the infirm, and children are at greatest risk from poor air quality. The USEPA estimates that between five and twenty percent of the population is especially susceptible to the effects of ozone, an airborne chemical that reacts in chemically adverse ways with internal body tissues.

Specific Purpose of the Regulatory Proposal:

This regulatory proposal is designed to implement one of the recommendations made by the ARB on how to improve the effectiveness of the Program. Under the provisions of this proposed regulation, vehicles with a manufacturer's gross vehicle

weight rating (GVWR) of less than 10,000 pounds will receive a loaded-mode, dynamometer-based smog check inspection. Currently, only vehicles with a GVWR of 8,500 pounds or less receive this type of inspection; heavier vehicles receive an idle-type test.

With the increasing sales of heavy-duty trucks, substantive emissions reductions can be achieved if most of these vehicles are subjected to the more comprehensive testing protocol. Passenger vehicles typically do not have weight ratings in excess of 8,501 pounds, and therefore, are already subject to the loaded-mode test protocol.

Consistent with state statute and federal regulation, loaded-mode (dynamometer-based) testing began in all enhanced areas of the state on June 8, 1998. The test protocol used is the Acceleration Simulation Mode (ASM) test, which places a calculated load on the vehicle and measures emissions at 15 and 25 miles per hour. Loaded-mode testing is a more comprehensive evaluation of a vehicle's exhaust because it allows for the measurement of oxides of nitrogen (NOx), a critical element in the formation of smog. The previous test, the static two-speed idle method, did not provide for NOx measurement.

These revisions make the following changes to existing regulation:

1. Adopts new loaded-mode pass/fail and gross polluter loaded-mode standards (in table form) for vehicles with a GVWR of less than 10,000 pounds. Instead of the current two-speed idle test, vehicles with a GVWR between 8,501 and 9,999 will instead receive a loaded-mode test.

2. Adds subsection (d), which authorizes technicians to perform the two-speed idle test on specified vehicles that may be incompatible with the dynamometer. If a truck has a business-oriented modification or design characteristic that renders the vehicle incompatible with the testing process – perhaps wide dual wheels that exceed the width of the dynamometer rollers, for example – a smog check technician is authorized to perform the traditional two-speed idle test on the vehicle.

   Subsection (d) also grants technicians the authority to use the two-speed idle test if the vehicle's unloaded drive axle weight exceeds 5,000 pounds. A definition of the term "unloaded" is also provided in this section. The authority to use the idle test does not extend to vehicles that have had performance or chassis modifications that are unrelated to business.

   Section (d) also requires the technician to note the reason the vehicle was given the two-speed idle test instead of the loaded-mode test on the final invoice unless the emissions analyzer itself prompts the technician to perform the idle-type test. Since stations must keep copies of the final invoice, a record will be created, which will prove helpful for enforcement purposes and

will also provide information to the consumer. The emission analyzer system currently requires the technician to enter a reason when a vehicle is given the two-speed idle test due to excessive weight.

3. These proposed regulatory changes also delete the existing, but inoperative, Table II and replace it with a new Table II that contains the pass/fail cutpoints and gross polluter standards for trucks with a GVWR of up to 9,999 pounds.

4. In addition, the entire section will undergo a comprehensive reorganization to simplify and clarify many of its provisions. This reorganization consists mainly of reordering and/or renumbering subsections, subdivisions and subparagraphs. Some clarifying, technical amendments are proposed, but there will be no change in the meaning or effect of any existing provision as a result of the reorganization.

5. Finally, with the incorporation in section 3340.42 of specific standards for the testing, both loaded-mode and two-speed idle mode, of heavy-duty vehicles, section 3340.42.1 becomes duplicative and unnecessary. Therefore, section 3340.42.1 will be repealed in its entirety.

Factual Basis:

In the middle of 2000, the California Air Resources Board (ARB) released a report on the effectiveness of the Program. ARB's report indicates that while the current Program is reducing a significant amount of motor vehicle emissions, improvements to the Program must be made if California is to meet federal air quality standards. For example, California's 1995 State Implementation Plan - the blueprint submitted to the United States Environmental Protection Agency that explains how the state will achieve compliance – claimed an emissions reduction of 112 tpd for the Program. ARB's report found that the emissions reductions associated with the Program are closer to 65 tpd, indicating that improvements are needed.

In a joint letter to the USEPA explaining how the shortfall could be eliminated, the Bureau and ARB asserted that near-term improvements to the Smog Check Program would result in a statewide emission reduction of almost 14 tpd by 2002. By 2005, the benefit increases to almost 22 tpd, and in 2008, the benefit reaches its maximum projected value of 24.1 tpd.

The proposed improvements include: more stringent emission cut-points; loaded-mode testing for heavy-duty trucks; a remote sensing component; improved evaporative testing; and, more vehicles directed to test-only or high-performing test-and-repair stations. Of course, long-term changes to the Program are also necessary, but such changes are outside the scope of these proposed regulations. The proposed action addresses the adjustment of the Program's emission cut-points to more closely align them with the cut-points developed by ARB. The method of calculating these cut-points is

detailed in the Bureau's draft report, *Proposed "Initial" Cut-Points for Heavy Duty Vehicles*, July 9, 2001.

Underlying Data:

1. *Evaluation of California's Enhanced Vehicle Inspection and Maintenance Program (Smog Check II)*, California Environmental Protection Agency, Air Resources Board, July 12, 2000

2. *Revised State Implementation Plan for California's Motor Vehicle Inspection & Maintenance Program*, California Department of Consumer Affairs, Bureau of Automotive Repair, December 1995

3. Program Improvement Plan Letter dated August 17, 2000, from Air Resources Board to Regional Administrator, Region IX, U. S. Environmental Protection Agency

4. BAR Draft Report 2001-04, *Proposed "Initial" Cut-Points for Heavy-Duty Vehicles*, July 9, 2001

Business Impact:

This regulation will not have a significant adverse economic impact on businesses.

The directly regulated community – licensed smog check technicians and stations – will more than likely be positively impacted by the proposed regulations. As the cut-points become more stringent, more vehicles will fail and the demand for repairs and after-repair re-tests will increase. This increased demand should result in additional business activity for all smog check stations.

Consumer Impact and Mitigation Strategies

The Bureau recognizes that the more stringent test and cut-points may have some adverse impacts on some owners of heavy-duty vehicles since vehicles that now pass an inspection may fail once the new test and cut-points are in place. However, if a vehicle is not undergoing a change-of-ownership transaction, an inspection is generally only required once every two years. In addition, these heavy-duty vehicles are already required to have a smog check inspection every two years and upon a change-ownership transaction. This regulation merely changes the type of inspection applicable to this class of vehicles; trucks with a GVWR between 8,501 and 9,999 pounds. On a general level, heavy-duty vehicle owners are also protected from overly tough cut-points because existing law prohibits the Bureau from adopting in-use cut-points that are more stringent than the vehicle's original certification standards. [Cf. § 44013(c), Health and Safety Code]

Furthermore, only vehicles registered or seeking registration in the enhanced areas of California will be affected by this proposal. Basic and change-of-ownership area vehicles will not be affected.

From a numerical perspective, the Bureau estimates that 137,000 vehicles, which currently receive the two-speed idle test, would now receive the loaded-mode test annually. Currently, less than eight percent of the heavy-duty vehicles tested fail the two-speed idle test. BAR estimates that the failure rate will only increase to less than 13% upon the adoption of the loaded-mode test procedure. Again, it should be noted that these 137,000 vehicles are currently tested using the two-speed idle test.

In crafting this regulation, the Bureau accounted for the possibility that trucks configured for business purposes may be adversely impacted. For this reason, trucks with modifications made for business purposes that render the vehicle incompatible with loaded-mode testing are exempted from the loaded-mode testing requirement. The same reasoning applies to motorhomes since they often pose a loaded-mode-testing problem as well. These are both acceptable reasons that can be stated on the final invoice. These vehicles will continue to be subject to the two-speed idle mode test procedure.

Specific Technologies or Equipment:

This regulation does not mandate the use of specific technologies or equipment.

This regulation does not mandate the use of new technologies or equipment. Loaded-mode test equipment has been required in enhanced area smog check stations since June of 1998.

Consideration of Alternatives:

No reasonable alternative which was considered or that has otherwise been identified and brought to the attention of the Bureau would be either more effective in carrying out the purpose for which the action is proposed or would be as effective and less burdensome to affected private persons than the proposed regulation.

No reasonable alternative has been considered or identified.